

**BAR PLOT****NOTE**

This command is obsolete. Although it still works, the preferred method is to use the BAR command in conjunction with the PLOT command. This is documented under the BAR command in the Plot Control chapter.

**PURPOSE**

Generate a bar chart.

**DESCRIPTION**

Bar charts are commonly used in business and presentation graphics. The following types of bars are commonly produced:

1. Standard bar charts (a bar is drawn from the data point to the X axis);
2. Grouped bar charts (bars are drawn for 2 or more groups of data);
3. Stacked (or divided) bar charts (the bar is divided into several intervals).

The BAR PLOT command is only useful for generating standard bar charts (see the NOTE section below for an explanation).

DATAPLOT provides commands to control the various aspects of the bar (see the RELATED COMMANDS section). Many of these are also demonstrated with the sample programs. The BAR PLOT command treats observations with the same X axis value as a common trace when setting attributes.

**SYNTAX**

BAR PLOT <y> <x> <SUBSET/EXCEPT/FOR qualification>

where <y> is a response variable;

<x> is a group identifier variable;

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

**EXAMPLES**

BAR PLOT Y X

BAR PLOT Y X SUBSET X > 2

**NOTE**

The BAR PLOT command and the PLOT command using the BAR switch define traces differently. For example, BAR PLOT Y X treats each distinct value of X as defining a separate trace. PLOT Y X treats Y as one trace. PLOT Y1 Y2 VS X treats Y1 as one trace and Y2 as another trace. PLOT Y X TAG treats each distinct value of TAG as defining a separate trace. This distinction between PLOT and BAR PLOT is relevant when assigning attributes to the bars (e.g., when using the BAR PATTERN command) since these commands use traces. That is, the first setting is applied to the first trace, the second setting is applied to the second trace, and so on.

Creating grouped and stacked bars is easier with the PLOT command used in conjunction with the BAR switch. The problem with grouped bars using the BAR PLOT command is that the BAR PLOT essentially functions as a histogram with a fixed width class interval. Setting up the data for groups typically violates this assumption. It can be done by using a separate BAR PLOT command for each group (and using the LIMITS and PRE-ERASE OFF commands). However, it is simpler with the standard PLOT command. The problem with divided bar charts is that it is difficult to give corresponding bars the same fill pattern (the BAR PLOT command gives bars with the same X value the same pattern).

**DEFAULT**

None

**SYNONYMS**

None

**RELATED COMMANDS**

PLOT	=	Generates a data or function plot.
CHARACTERS	=	Sets the character type for plot points.
LINES	=	Sets the line type for plot points.
SPIKES	=	Sets the on/off switches for plot spikes.
BAR	=	Sets the on/off switches for plot bars.
BAR BASE	=	Sets the base location for bars on plots
BAR FILL	=	Sets the on/off switches for plot bar fills.

BAR FILL COLOR	=	Sets the colors of the bar fills.
BAR DIMENSION	=	Sets the bar dimension to 2d or 3d.
BAR DIRECTION	=	Sets the bar direction to horizontal or vertical.
BAR PATTERN	=	Sets the types for bar fill patterns.
BAR PATTERN COLOR	=	Sets the colors for bar fill patterns.
BAR PATTERN LINE	=	Sets the line types for bar fill patterns.
BAR PATTERN SPACING	=	Sets the line spacings for bar fill patterns.
BAR PATTERN THICK	=	Sets the line thicknesses for bar fill patterns.
BAR BORDER COLOR	=	Sets the colors for bar border lines.
BAR BORDER LINE	=	Sets the types for bar border lines.
BAR BORDER THICKNESS	=	Sets the line thicknesses for bar border lines.
BAR WIDTH	=	Sets the width of plot bars.

## REFERENCE

“Statistical Graphics,” Calvin Schmid, John F. Wiley and Sons, 1979.

## APPLICATIONS

Presentation Graphics

## IMPLEMENTATION DATE

Pre-1987

## PROGRAM

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ORIENTATION PORTRAIT
LET X = DATA 81 82 83 84 85
LET Y = DATA 2 5 9 15 28
.
YTIC MARK SIZE 1.2
X1TIC MARK LABEL FORMAT ALPHA
XLIMITS 81 85
XTIC OFFSET 1 1
X1TIC LABEL CONTENT 1981 1982 1983 1984 1985
X1LABEL YEAR
MINOR X1TIC MARK NUMBER 0
Y1LABEL SALES (IN MILLIONS OF DOLLARS)
YLIMITS 0 30
MAJOR YTIC MARK NUMBER 4
MINOR YTIC MARK NUMBER 1
.
MULTIPLY 3 2; MULTIPLY CORNER COORDINATES 0 0 100 100
.
TITLE BAR CHART WITH NO OPTIONS
BAR PLOT Y X
.
BAR WIDTH .5 ALL
TITLE BAR CHART WITH USER DEFINED BAR WIDTH
BAR PLOT Y X
.
BAR DIMENSION 3 ALL
TITLE BAR CHART WITH 3-DIMENSIONAL EFFECT
BAR PLOT Y X
.
BAR FILL ONTS ALL
TITLE BAR CHART WITH 3-DIMENSIONAL EFFECT, FILLED
BAR PLOT Y X
.
TITLE DEMONSTRATE A FILL PATTERN

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BAR DIMENSION 2 ALL  
BAR FILL ON ALL  
BAR PATTERN HORI VERT D1 D2 D1D2  
BAR PATTERN SPACING 1 1 4 4 4  
BAR PATTERN THICKNESS 0.1 ALL  
BAR PLOT Y X  
.  
HORIZONTAL SWITCH ON  
Y1TIC MARK LABEL FORMAT ALPHA  
YLIMITS 81 85  
YTIC OFFSET 1 1  
Y1TIC LABEL CONTENT 1981 1982 1983 1984 1985  
Y1LABEL YEAR  
MAJOR Y1TIC MARK NUMBER 5  
MINOR Y1TIC MARK NUMBER 0  
X1LABEL SALES (IN MILLIONS OF DOLLARS)  
XTIC OFFSET 0 0  
X1TIC MARK LABEL FORMAT DEFAULT  
MINOR X1TIC MARK NUMBER DEFAULT  
XLIMITS 0 30  
MAJOR XTIC MARK NUMBER 4  
MINOR XTIC MARK NUMBER 1  
TITLE VERTICAL BAR CHART  
BAR PATTERN SOLID ALL  
BAR FILL COLOR G15 G30 G45 G60 G75  
BAR PLOT Y X  
.  
MULTILOT OFF

